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# **China Report**

**AGRICULTURE**

**No. 119**



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26 January 1981

## CHINA REPORT

## AGRICULTURE

No. 119

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# I. GENERAL INFORMATION

## RECLAMATION OF SANJIANG PLAIN BRINGS CLIMATIC CHANGES

Beijing QIXIANG [METEOROLOGY] in Chinese Mar 80 pp 1-2

[Article by the Heilongjiang Provincial Meteorological Bureau: "Climatic Changes After Reclamation of the Sanjiang Plain"]

[Text] Foreword

The Sanjiang Plain is situated in our nation's northeast at the confluence of Heilongjiang, Wusuli Jiang and Songhu Jiang. The total area of the plain is about 155.45 million mu. The topography here is low and flat. Originally there were 335.39 million mu of swamps and swampy wasteland. Large area reclamation began in 1958, and over 46 million mu have already been reclaimed. At the same time, the area of swamps is rapidly dwindling. An area of 12.25 million mu of forests has already been felled. At present, there are only 310,000 mu of protective forests for farmland, less than one-one-hundredth the area of cultivated land. The characteristics of the remaining vegetation have undergone visible change. In general, since large area reclamation of the Sanjiang Plain, the bottom cushioning surface has changed greatly.

In recent years, the climate over the Sanjiang Plain has been abnormal, manifested by the following:

1. The area has changed from an easily waterlogged area to a severely arid area. Droughts persist for a long time and the frequency of droughts has increased. In recent years, the amount of rainfall has decreased more rapidly than other areas.
2. The relative humidity of the air has gradually decreased.
3. Summer temperature varies in a trend contrary to that in other regions, manifested by a gradual rise in temperatures.

How are such climatic changes produced, whether human activity affects the climate, in particular, what is the effect of the destruction of the original ecological balance, and how can a new ecological balance be established to prevent the occurrence of a vicious cycle, are questions which have naturally caught the people's attention.

To study these problems, our bureau organized a team of over 20 technicians from the Provincial Meteorological Science Institute, the Meteorological Observatory, the Hejiang Meteorological Bureau and Mudanjiang Meteorological Observatory to conduct preliminary observation and analysis of the problems concerning the effects of change in the lower cushioning surface of the Sanjiang Plain upon the climate. The results of the analysis and study are described below.

## II. Analysis and Comparison

The climate of the Sanjiang Plain is like that of other regions, it is affected by atmospheric circulation and solar activity. This article will not discuss this part, but will only discuss the effect of human activity upon the Sanjiang Plain.

The reclaimed area of the Sanjiang Plain, the area of forests felled, the area of disappearance of water surfaces, and the situation shown in aerial photographs show that the change in large water surfaces has already affected the amount of clouds at 1,000 and 2,000 meters in the atmosphere. Therefore, the area and the height have all surpassed the scope as a microclimate.

Thus, we used climatic comparison to judge the abnormal changes that have occurred after reclamation of the Sanjiang Plain. First we found regions which have similar patterns of climatic change as that in the Sanjiang Plain. Then we separately calculated the trends and the scale of change of climatic elements of the regions having similar patterns of climatic changes after large area reclamation of the Sanjiang Plain. Finally we compared the changes of the regions with similar patterns of climatic variations since the end of the 1950's. Then we estimated the particularities in the climatic variations of the Sanjiang Plain during these years. The results of analysis and comparison are as follows.

From the point of view of the weather and climate, after emergence of the warm high pressure system at high altitudes over the continental Yakutsk region and the cold high pressure over the Sea of Okhots in summer, the weather condition persists for a definite period and this greatly affects the weather of the three provinces of the northeast. Its emergence causes the westerly wind belt to branch out over the region of Yakutsk-Okhots Sea, causing the so-called weather of the northeast cold eddy. At this time, the three provinces of the northeast are affected by the wave moments of the southern branch of low pressure and the weather is mostly characterized by low temperatures and showers. The high pressure system over the subtropical western Pacific intensifies and the ridge extends westward. The three provinces of the northeast frequently have rain in June and July because of the affects of the subtropical frontal zone at the north of the high pressure system. Less rain falls during August and September because the weather is controlled by the subtropical high pressure system. But during this period, typhoons are active, and the amount of rainfall over the eastern part of the three provinces of the northeast is affected.

It can thus be seen that the Sanjiang Plain, the Songnen Plain, the plain of the upper reaches of Songhuajiang and the Liaohe Plain often are affected by

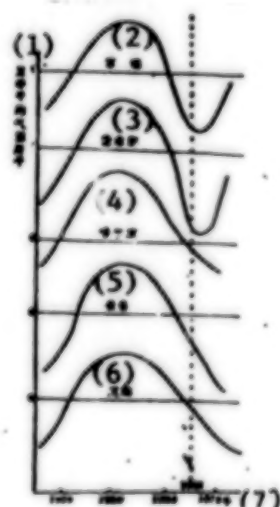


the same weather system. At the same time, they are also alluvial plains, and their topography and their distances from the sea are similar. They can be considered as possessing the basic conditions that constitute similar patterns of climatic variations in these areas.

The following examines the similarities of the patterns of climatic variations of these regions before the end of the 1950's (before large area reclamation of the Sanjiang Plain).

First we analyzed the amount of rainfall and temperatures at the meteorological stations with relatively longer periods of meteorological data (Jiamusi, Fujin, Harbin, Changchun, Shenyang) by harmonic wave analysis. We can see that their cycles and their peak and trough positions have similarities. For example, in the 9th wave of summer temperatures, Jiamusi has  $L = 7$  years,  $A = 0.44$ ; Harbin's  $L = 7$  years,  $A = 0.63$ ; Changchun's  $L = 7$  years,  $A = 1.05$ . In the 2d wave, Jiamusi has  $L = 35$  years,  $A = 1.7$ ; Harbin's  $L = 35$  years,  $A = 1.10$ ; Changchun's  $L = 35$  years,  $A = 1.07$ .....

Then we looked at the sliding curve of average temperatures. Before the end of the 1950's, their variations were basically similar, while after the end of the 1950's, there were visible differences. For example, on the sliding curve of variations of average temperatures in summer (June to August) (Figure 1), the patterns of change at Fujin, Jiamusi, Harbin, Changchun and Shenyang before the end of the 1950's were relatively consistent. Thus, the four large plains mentioned above can be regarded as regions with similar patterns of climatic variations. But it can be seen from Figure 1 that after the end of the 1950's, only the summer temperatures in Fujin and Jiamusi in the Sanjiang Plain rose while the summer temperatures in other regions of Harbin, Changchun and Shenyang continued to drop.



- Key:
- (1) Anomaly of average summer temperatures
  - (2) Fujin
  - (3) Jiamusi
  - (4) Harbin
  - (5) Changchun
  - (6) Shenyang
  - (7) Year

Figure 1. Curves of Sliding Averages of Anomalies of Average Temperatures in Summer

Since the end of the 1950's, the variations of climatic elements with time at the various places are generally linearly related. For simplicity in calculations, the slope of the variation of the climatic elements with time is used for comparison. The slope is calculated by the following formula.

$$B = \frac{\sum(xy) - N\bar{x}\bar{y}}{\sum(x^2) - N\bar{x}^2}$$

In the above:  $x$  is time taking the year as the unit,  $y$  is the climatic element corresponding to that year,  $B$  is the slope.

# 1. Comparison of the Variations of Rainfall From 1958 to 1978

(1) Comparison of the variations over neighboring regions within the same latitudinal belt: The Sanjiang Plain extends from  $44^{\circ}\text{N}$  in the south to  $48.5^{\circ}\text{N}$  in the north. Within this latitudinal belt, the variations of the slope of rainfall show a reduction of 4 mm per year over the Songnen Plain, a reduction of 9 mm over the Sanjiang Plain, and a reduction of 5 mm over Soviet East Asia (Figure 2), i.e., within the same latitudinal belt, the amount of reduction in rainfall over the Sanjiang Plain increases year by year.

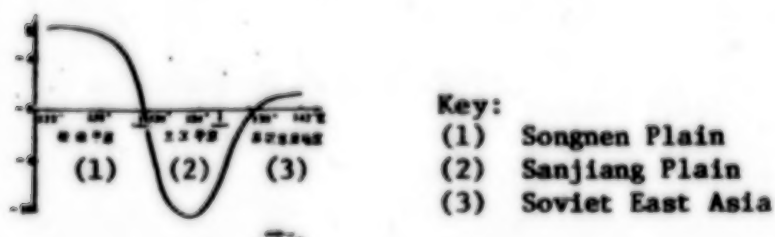


Figure 2. Comparative Diagram of the Slopes of Annual Rainfall in Neighboring Regions Within the  $44^{\circ}\text{N}$  and  $49^{\circ}\text{N}$  Belt

(2) In regions with similar patterns of climatic change (the four large plains of the northeast), the reduction in the amount of rainfall over the Sanjiang Plain year after year is the greatest, reaching -9.18 (Table 1).

(3) On the distribution map of the slope of rainfall over the East Asian region it can also be clearly seen that the Sanjiang Plain is the geographical center of reduction of rainfall in the East Asian region (diagram omitted).

# 2. Comparison of the Relative Humidity of the Atmosphere From 1958 to 1978

Because the method of analysis of humidity and summer temperatures and that of rainfall are the same, therefore the following gives only the results of analysis.

Table 1. Comparison of the Slopes of Annual Rainfall Over the Four Great Plains of the Northeast

Regions	Station Name	Slope	Average
Sanjiang Plain	Tongjiang	-13.55	- 9.18
	Luobei	- 3.55	
	Suibin	-11.42	
	Fujin	-10.30	
	Raohe	- 9.66	
	Jiamusi	-11.50	
	Jixian	- 5.15	
	Baoqing	- 7.10	
	Boli	- 9.50	
	Hulin	- 6.44	
	Mishan	- 9.57	
	Muling	- 8.18	
	Mudanjiang	- 8.47	
Liaohe Plain	Tongliao	- 5.27	- 0.92
	Siping	+ 1.10	
	Shenyang	- 0.79	
	Anshan	+ 1.29	
Songnen Plain	Nenjiang	- 4.51	- 4.59
	Qiqihar	- 8.39	
	Hailun	- 6.30	
	Suihua	+ 0.33	
	Harbin	- 5.46	
	Zhaoyuan	- 3.19	
Plain of the Upper Reaches of Songhua-jiang	Yushu	- 3.26	- 2.22
	Jilin	- 3.82	
	Daan	- 2.25	
	Baicheng	- 2.98	
	Dehui	+ 0.06	
	Changchun	+ 0.03	
	Changling	- 2.70	

(1) Within the same latitudinal belt, the Sanjiang Plain's yearly reduction in humidity is the greatest, registering -0.12 while the change in humidity in the Songnen Plain is the smallest at 0.01.

(2) The variation in relative humidity in the atmosphere of the Sanjiang Plain is the most visible among the four great plains of the northeast. The rate of change towards aridity is the fastest, with a slope of -0.12; while that in the Songnen Plain is 0.01; it was -0.03 in the plain of the upper reaches of Songhua-jiang; and 0.00 in the Liaohe Plain.

### 3. Comparison of Variations in Summer Temperatures From 1958 to 1978

(1) Within the same latitudinal belt, summer temperatures in the Sanjiang Plain increases year after year visibly with a slope reaching 0.04 while temperatures change only slightly or reduce only slightly in the Songnen Plain. Temperatures drop slightly in Soviet East Asia.

(2) Of the four large plains of the northeast, summer temperatures visibly rise year after year only in the Sanjiang Plain with a slope reaching 0.04; while the summer temperatures in the other plains generally drop slightly, temperatures in the Liaohe Plain have a slope of -0.02; those in the Songnen Plain have slope of 0.00; those in the plain of the upper reaches of Songhua-jiang have a slope of 0.01.

(3) The distribution diagram of the slopes of summer temperatures of the East Asian region shows the Sanjiang Plain is the geographical center of annual increase in temperatures.

### III. Brief Conclusion

Seen from the abnormal climate in the Sanjiang Plain, the bottom cushioning surface exerts a visible effect upon the climate.

Over the past 20 years, especially during the period of rampage of Lin Biao and the "gang of four," the blind reclamation of the Sanjiang Plain, destruction of large areas of forests, shrinking of the area of water surfaces all visibly affected the amount of rainfall, humidity of the atmosphere and temperatures. Although the annual amount of rainfall of all places is decreasing, the decrease in the amount of rainfall in the Sanjiang Plain over the past 20 years has been greater than that in other regions by about 100 mm and this has already intensified aridity. During this period, relative humidity of the air has also decreased 2 percent more. Summer temperatures have gradually risen year by year, about 0.8°C higher than 20 years ago while temperatures in other areas have dropped. All these indicate that our development of the Sanjiang Plain must have a rational plan. The method of producing food grain crops singularly must be changed, the forests must be protected and a definite area of water surfaces must be maintained to establish a new ecological system and protect agrometeorological resources.

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## SOLAR RADIATION OVER QINGHAI-XIZANG PLATEAU CHARTED

Beijing QIXIANG [METEOROLOGY] in Chinese Mar 80 pp 6-7

[Article by Gao Guodong [7559 0948 2767] and Lu Yurong [7120 3254 5554] of the Department of Meteorology of Nanjing University: "Release of Solar Radiation Over the Qinghai-Xizang Plateau"]

[Text] Solar radiation reaching the surface of the earth is not all received by the earth's surface. The ground surface absorbs a part and at the same time reflects some. The part being absorbed by the ground surface is called the absorbed radiation, the part reflected by the ground surface is called the reflected radiation. In addition, after the ground surface absorbs the solar radiation of short wavelengths, it emits radiation of long wavelengths. Similarly, after the atmosphere and the cloud layers absorb radiation, radiation of long wavelengths is released. The part of atmospheric radiation of long wavelengths that is reflected back to the ground surface is called the atmospheric reverse radiation. The difference between the radiation of long wavelengths of the ground surface and atmospheric reverse radiation represents the radiation of long wavelengths scattered and lost by the ground surface and is called effective radiation. Reflected radiation and effective radiation are both radiation released from the ground surface.

The amount of solar radiation received by a certain locality is determined by the amount of solar radiation received and the amount of solar radiation released. Now, we will concentrate on analyzing the release of solar radiation over the Qinghai-Xizang Plateau.

#### 1. Rate of Reflection of the Qinghai-Xizang Plateau

The amount of radiation reflected by the ground surface  $U$  is the product of the amount of total radiation  $Q$  reaching the ground surface and the rate of reflection  $\alpha$  of the ground surface, i.e.:  $U = \alpha Q$

Therefore, when the total amount of radiation of the ground surface is determined, the amount of reflected radiation is determined by the rate of reflection. The rate of reflection of the Qinghai-Xizang Plateau is determined by the "national distribution map of the rates of reflection of radiation" drawn from data of solar radiation actually measured by weather stations in combination with the geographical situation and climatic characteristics of each



locality. There are few meteorological stations in the Qinghai-Xizang Plateau. The topography is extremely complex, the differences in elevation from sea level are great, thus this article will discuss the rate of reflection from the viewpoint of the entire macroclimate of the Qinghai-Xizang Plateau.

The annual average rate of reflection of the Qinghai-Xizang Plateau is generally between 0.25 and 0.40. At places of high elevations and where snow is present year round, the rate of reflection can be as high as over 0.50.

Its distribution characteristics are as follows: On the east and south sides of the plateau, the rate of reflection is lower. On the west and north sides the rate of reflection is greater. The rate of reflection throughout the entire year is smallest during summer and greatest during winter. The rate of reflection of the plateau in spring is slightly greater than in autumn because during autumn, more accumulated heat remains from summer and freezing of the ground surface in autumn is less than in spring. (Figures 1, 2)



Figure 1. Distribution of Surface Reflection in January on the Qinghai-Xizang Plateau (percent)

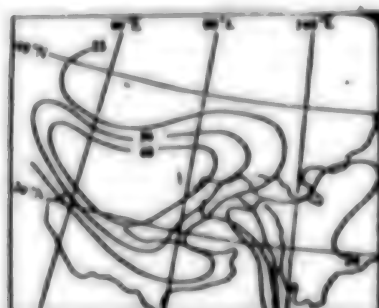


Figure 2. Distribution of Surface Reflection in July on the Qinghai-Xizang Plateau (percent)



In the southeastern part of the Qinghai-Xizang Plateau, the annual variation of the rate of reflection is relatively stable. For example, at Tengzong, Cangdu and Lhasa, the variation in the annual rate of reflection is only 0.05 (see table)

Comparison of the Rate of Reflection on the Qinghai-Xizang Plateau and Our Nation's Eastern Regions

Name of Station					
Month	Tengchong	Qamdo region	Lhasa	Chengdu	Shanghai
1	0.23	0.20	0.25	0.19	0.15
2	0.20	0.19	0.22	0.14	0.15
3	0.21	0.20	0.21	0.16	0.15
4	0.21	0.18	0.23	0.15	0.15
5	0.27	0.20	0.22	0.16	0.17
6	0.20	0.17	0.20	0.15	0.17
7	0.23	0.17	0.21	0.19	0.17
8	0.21	0.19	0.24	0.18	0.18
9	0.21	0.18	0.22	0.19	0.18
10	0.18	0.15	0.20	0.16	0.19
11	0.20	0.16	0.24	0.16	0.18
12	0.23	0.18	0.24	0.20	0.18

Compared to the regions of the Changjiang River valley to the east of the plateau, the monthly rate of reflection in the Changjiang River valley is smaller than that of the plateau, but the annual variation is also about 0.05. This situation is basically the same in Vietnam, Cambodia and India south of the plateau. But to the west and north of Lhasa on the plateau, the numerical values of the rate of reflection and the annual variation both visibly increase. Especially in winter, or in regions in the inner parts of the plateau and on high mountains where snow continuously accumulates, the numerical values of the rate of reflection is 1 to 2 times higher than that at the Lhasa area and the annual variation is also much greater.

Comparing the rate of reflection of the Qinghai-Xizang Plateau to that of some regions near our nation's northern part we see that the rate of reflection during winter in Central Asia is greater than that of the Plateau. At some places, the rate is as high as above 0.70. Although the annual variation over the Qinghai-Xizang Plateau is already very large, but the annual variation of the rate of reflection in Mongolia and the Soviet Union to the north is even greater. For example, the highest rate of reflection in December in the Tashkent region of the Soviet Union is 0.55 and the lowest rate of reflection in March is 0.12, the annual variation is 0.37.

## II. Effective Radiation of the Qinghai-Xizang Plateau

The following formula is used to compute the amount of effective radiation of the ground surface E:

$$E = E_0(1 - C_n) + \Delta E$$

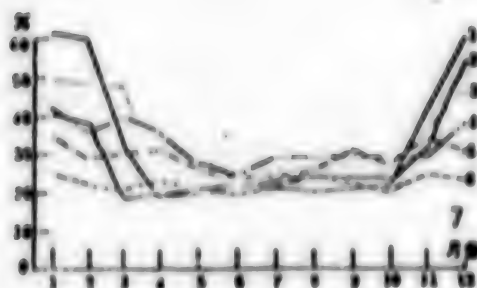


Figure 3. Comparison of the Rate of Reflection of the Qinghai-Xizang Plateau and Some Foreign Regions

Key: 1. Alma Ata (Vyerni)  
2. Tashkent  
3. Ulaanbaatar  
4. Shigatse  
5. Karmu  
6. Lhasa  
7. Month

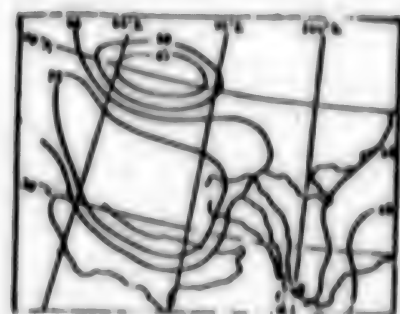


Figure 4. Distribution of Effective Radiation Throughout the Year on the Qinghai-Xizang Plateau (kilocalories/cm<sup>2</sup>·year)

The amount of  $E_0$  of effective radiation on clear days in the above formula is obtained by the theoretical formula of the transmission of radiation developed by M. E. Beryland. The coefficient  $C$  describing the weakening of effective radiation due to clouds can be derived from surface temperatures and temperature data at the base of the clouds.

Because the Qinghai-Xizang Plateau is high in elevation, the atmosphere is thin, density of the air is small, the reverse radiation of the atmosphere is not great, thus, the effective radiation over the Qinghai-Xizang Plateau is high among the regions of our nation. The amount of effective radiation throughout the year is between 55 and 70 kilocalories/centimeter<sup>2</sup>·year. It increases at higher elevations surrounding the Xizang Plateau.

The smallest value of the effective radiation throughout the year over the Qinghai-Xizang Plateau occurs during winter (January, February), the numerical value is between 3.5 and 5.5 kilocalories/centimeter<sup>2</sup>·month; the greatest value throughout the year occurs at the end of spring (May), the numerical value is between 5.0 and 8.0 kilocalories/cm<sup>2</sup>·month; during the summer months, because of the arrival of the rainy season, the amount of clouds and the moisture and vapor content in the atmosphere increase, and the effective radiation is smaller than in spring and autumn, the numerical value is only between 4.0 and 7.0 kilocalories/cm<sup>2</sup>·month. After the rainy season has passed, the weather is clear, the effective radiation rises again, generally forming a second high about October, the numerical value may reach higher than 6.0 kilocalories/cm<sup>2</sup>·month.

The effective radiation in our nation's eastern regions is much smaller than that of the plateau, the greatest value occurs at the end of summer, the numerical value is between 3.0 and 4.0 kilocalories/cm<sup>2</sup>·month, the smallest value occurs during spring when cyclonic activities are more frequent, the numerical value is between 1.5 and 3.0 kilocalories/cm<sup>2</sup>·month, a trend exactly opposite that of the plateau (see Figure 5).

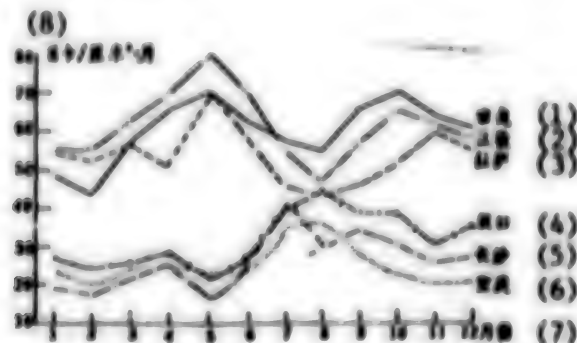


Figure 5. Comparison of the Effective Radiation on the Qinghai-Xizang Plateau and Our Nation's Eastern Regions

Key:

- |             |   |
|-------------|---|
| (1) Paikou  | (5) Changsha                            |
| (2) Guantse | (6) Chongqing                           |
| (3) Lhasa   | (7) Month                               |
| (4) Hankou  | (8) 100 calories/cm <sup>2</sup> ·month |

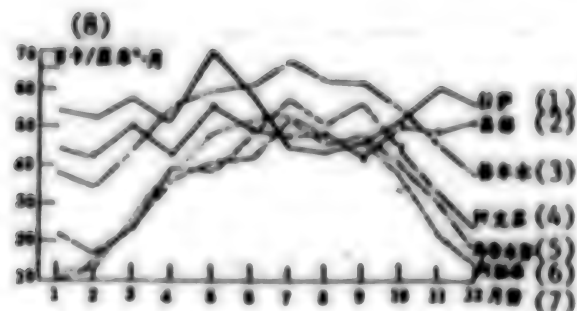


Figure 6. Comparison of the Effective Radiation on the Qinghai Xizang Plateau and The Xinjiang Region

Key:

- |             |   |
|-------------|---|
| (1) Lhasa   | (5) Urumchi                             |
| (2) Changdu | (6) Altay                               |
| (3) Karmu   | (7) Month                               |
| (4) Aksu    | (8) 100 calories/cm <sup>2</sup> ·month |

Comparison of the Qinghai-Xizang Plateau and the Xinjiang region shows the effective radiation throughout the year in the desert regions of Xinjiang is between 40 and 50 kilocalories/cm<sup>2</sup>·year, in winter, it is only 1.5 kilocalories/cm<sup>2</sup>·month, the region with the lowest numerical value throughout the nation. In summer, the effective radiation can reach 7.0 kilocalories/cm<sup>2</sup>·month, also the region with the highest value throughout the nation. The trend of variation changes and the variation is greater than that of the plateau by onefold (see Figure 6).

Comparison of the effective radiation of the Qinghai-Xizang Plateau and nations of South Asia shows the total annual effective radiation in the South Asian region is between 40 and 50 kilocalories/cm<sup>2</sup>·year, consistent with the numerical values of the southern rim of the Xizang Plateau of our nation, smaller than that of the interior of the Xizang Plateau and about the same as that in the Qinghai, Sichuan, Yunnan and Guizhou regions. The variation in the effective radiation throughout the year is less drastic than that of the Xizang Plateau, generally the greatest value occurs in winter and spring, and the lowest value occurs in the peak summer monsoon period (diagram omitted).

Comparison of the Qinghai-Xizang Plateau and Mongolia and the Soviet Union to the north shows that the total annual effective radiation of the region of the Soviet Union north of Mongolia and Xinjiang is between 40 and 50 kilocalories/cm<sup>2</sup>·year, smaller than that of our nation's Qinghai-Xizang Plateau, but in Soviet Central Asia, the total annual effective radiation is the same as that of our nation's Qinghai-Xizang Plateau, reaching over 60 kilocalories/cm<sup>2</sup>·year, but the annual variations are greater. For example, in the Irkutsk region of the Soviet Union, the greatest value of the effective radiation in June is about 5 kilocalories/cm<sup>2</sup>·month, the smallest value in January is about 2 kilocalories/cm<sup>2</sup>·month, the annual variation is about 3 kilocalories/cm<sup>2</sup>. In the Tashkent region of the Soviet Union, the greatest value of effective radiation in June is 7.5 kilocalories/cm<sup>2</sup> and the smallest value of the effective radiation in December is 2.5 kilocalories/cm<sup>2</sup>, the annual variation can reach 5 kilocalories/cm<sup>2</sup> (diagram omitted).

9296

CSO: 8111/0113

## 'RENMIN RIBAO' DISCUSSES LIVESTOCK BREEDING

HKD70648 Beijing RENMIN RIBAO in Chinese 19 Dec 80 p 2

[Commentator's article: "The Correct Understanding of Herbivorous Livestock Breeding"]

[Text] In developing herbivorous livestock breeding, we should first of all correctly understand the importance of herbivorous livestock breeding. The investigative report, entitled "Bring Into Play the Natural Superiority of the Southwestern Regions and Go All Out To Develop Herbivorous Livestock Breeding," published in today's newspaper, explains with the use of fairly exhaustive investigative data the necessity and the possibilities for the development of herbivorous livestock breeding, as well as the important role it will play in changing the irrational economic structure of agriculture and the people's food structure.

For a long time, the attitude of emphasizing farming and neglecting animal husbandry has been prevalent on China's agricultural front, and it has generally been maintained that "agricultural production means grain production," and that "to eat food means to eat grain." In practicing agriculture, we have thought only about the amount of land under cultivation, and we have only dealt with the basic construction of cropland. We have not thought about the comprehensive opening up and use of grasslands, grazing areas in mountainous areas and upland slopes, and about bush and woodlands. This does not conform with the requirements of modernizing agriculture as a whole, which involves the development of all aspects of farming, forestry, animal husbandry, sideline industries and fishery; nor does it conform with the requirements of modernization of the food structure, expressed in the 12 words, "grain, vegetables, gourds, beans, oil, sugar, eggs, fruit, fish, meat, milk and wine" (in which grain occupies only a small proportion). If we stick to this viewpoint, we will only see China's weakness in having only a small amount of cultivated land, and we will not notice our country's great strength in that it possesses broad tracts of prairie, grasslands in mountainous areas, and grassy uplands; we will also not be able to fully comprehend the dialectical relationships of the mutual interdependence and the mutual promotion of farming and animal husbandry. It has been proved in practice that, if all the domestic animals are thriving, then there will be bumper harvests in all the different kinds of grain, and that, if we practice only one of the different branches of agriculture, not only will we not be able to make



full use of natural resources, we will also not be able to utilize our labor to the fullest. The results of this would be that it would not be possible to make progress in either farming or animal husbandry, and the peasants would not be able to extricate themselves from the predicament of bitter poverty for a long time.

Looking at the present state of livestock breeding, it may be seen that there exists the phenomenon of emphasizing the raising of pigs and neglecting herbivorous livestock. In areas where there is plenty of grain but little fodder, it is permissible to encourage the raising of pigs, but to attempt to "regard the pig as the first among the six domestic animals" in districts where there is little grain but plenty of fodder, is to go against the principles of suiting methods to local conditions and of encouraging strong points and avoiding weaknesses, and is very irrational and uneconomical. In the past, we spread propaganda saying that the whole of a pig's body was valuable, but surely it is the case that the whole of a cow or sheep is valuable, too? A cow can be used for plowing and for transportation and can also provide milk. A milch cow of improved breed produces 8,000 jin of milk annually, and even when only a part of this is being used by humans and part for the raising of calves, the annual output of milk may still be 2,000 jin. If the hide of a cow is used to manufacture shoes, the income received from this source may be 500 or 600 renminbi; the tendons, horns and hair are all raw materials for industry. The milk, wool, hide, intestines, horns and so on of sheep are all valuable; also, the nutritional value of beef and mutton is higher than that of pork, and contains more protein; it contains less fat, and in particular less lipase, and it does not tend to increase the level of cholesterol in the human body. Aside from this, cows and sheep eat grass and thus require less refined foodstuffs than pigs do. If the pasturing is looked after well, it may be possible to avoid the use of refined fodder altogether, and so the capital required will be much less than that needed for raising pigs, and the profits will be much greater. Of course, pork still constitutes the main part of China's meat supply, and in those areas which are suited to the raising of pigs we should continue to go all out for the development of the pig-rearing industry. As far as the horse-breeding industry is concerned, it has good development prospects for some time to come. Up to the sixties and seventies, because of the development of mechanization, the number of horses in use was declining, but in recent years there has been a revival in the use of horses as a result of the energy crisis. Thus, in the 5 years from 1974 to 1978, there was a net increase of 1.36 million in the number of horses in the United States, to a total of 9.44 million. Again, between 1978 and 1979, Japan was buying horses from us. In China's agricultural mechanization, machine power has replaced the horse only in some very strenuous kinds of work, and in such areas as plowing, transportation and [word indistinct] sources of motive power which cannot be cut down. Thus, the need for horses for purposes of agricultural production and transportation in the southwestern region, where there is only a small amount of agricultural mechanization to date and where communications are difficult, is even more marked.



The full utilization of prairies, grasslands in mountainous areas, and upland pastures, whether in pastoral or farming areas, demands the mobilization of the state, the collectives, and of commune-member households in order to promote the public and private rearing of livestock. For many years, under the influence of the ultraleftist ideology, the state of mind in which people were afraid of individual commune members' raising livestock, especially large domestic animals, constituted a big stumbling block in the development of herbivorous livestock breeding. In many areas, only the collective raising of livestock was emphasized, while raising by individual commune-member households was neglected, and this even went as far as putting limits on, or forbidding, the rearing by commune members of milch cows, mares and sheep. One reason for this was that since large domestic animals, especially the females, are considered as means of production, in many areas did not dare tell individual households to raise them. They were also afraid that if the families of commune members became prosperous, they might be seen as "taking the capitalist road." There were no real grounds for this cautiousness, since the rearing of livestock by commune members, by its nature, is subsumed within the subsidiary economy of the socialist collective economy; it exists in subordination to the socialist collective economy and not in subordination to capitalism. Even if a commune member has a lot of large livestock, including livestock used for purposes of breeding and production, he is still incapable of turning these assets into capital which might be used to exploit hired labor. Provided that other people are not exploited, that there is no speculation or infringement of the laws, and that no harm is done to the collective, then growing prosperous through the practice of household livestock breeding can only be of benefit to the state, to the collective and to the individual, how can this lead to capitalism?

China's geographical characteristics are that there are many large mountains and that there are many desert areas and wildernesses. Thus, if we are to advance towards breadth and depth in agriculture, we must advance towards the wild mountains, deserts and wildernesses, and march along the road of the integration of farming, forestry and livestock breeding. The vigorous development of the herbivorous livestock breeding industry is an extremely important link in the integration of farming, forestry and livestock breeding.

CSO: 4007

'RENNIN RIBAO' CRITICIZES RECKLESS LOGGING

HK221035 Beijing RENMIN RIBAO in Chinese 6 Dec 80 p 1

[Commentator's article: "Excessive, Indiscriminate Logging Is Not Allowed"]

[Text] On 3 December, the State Council issued an emergency circular banning reckless logging. It urged people's governments at all levels, people of all trades and the people in general to take immediate steps to firmly implement the circular.

In many localities today, indiscriminate logging has reached a very critical level. The mismanagement of timber has resulted in excessive logging among many units while departments not dealing in timber and bamboo have entered forested areas to purchase these products. This has caused uncontrolled profiteering in timber and bamboo. Consequently, cases of killing and wounding forest protection personnel have occurred quite frequently. If this serious situation is not speedily curbed, it will result in extensive destruction of forest resources, affecting not only the supply of timber for national construction and for the people's livelihood, but also seriously affecting the ecological balance in the natural world and bringing misfortune to our prosperity. Taking determined measures to save forest resources now brooks no delay.

Our country's forest resources are extremely scarce. To insure that there will be an adequate supply of timber for national construction and for the people's livelihood, we should vigorously develop forest resources while strictly controlling logging in existing forests. Otherwise, before long, our very limited forest resources will be completely depleted. Since this is a major question relating to the fundamental interests of the state and the people, people's governments at all levels must take serious steps to deal with it. Any logging not covered by the plan should be firmly stopped while logging that is over and above the original quota should be halted immediately. Unified purchasing and unified marketing of timber and bamboo should be strictly enforced. Since timber is exclusively handled by forest departments, no other departments, units and individuals are allowed to enter forested areas to fell, purchase or process timber and bamboo. All free markets of timber and bamboo in forested areas must be closed. It is necessary to reorganize all commune- and brigade-run timber processing plants in forest areas.

To protect and develop forest resources and revive the economy of mountain areas, consideration should be given to the interests of the state, the localities, the collective and individuals. This principle of the state is firmly established. In the past, some forested areas did not pay sufficient attention to this question. From now on, this should be readjusted under proper leadership. However, the fact is our country's forest resources are rather limited so logging plans must be strictly controlled. As a rule, trees must not be felled before they have grown properly. Reckless in particular, logging means to overcome local financial problems and to increase the income of communes and production brigades is not permitted. In state-owned forest areas, it is impermissible to allocate trees to individuals with the sole consideration of benefiting the masses. Primarily, the masses in forested areas should be organized to participate in the production of timber and bamboo so that they may obtain rational economic interests through such participation.

It is imperative that the "forest act (tentative)" be seriously implemented. The jurisdiction over forests should be clearly defined, and subjecting it to change it will not be allowed. We should earnestly protect the jurisdiction over mountain forests belonging to the state, the collective and individuals and see to it that it is not violated. In localities where the jurisdiction is not clear or is controversial, the local people's governments should make earnest efforts to settle the issues. Before such disputes are settled, no party is allowed to log. We should uphold the policy of state monopoly on timber produced by state-run forestry units and the policy that timber and bamboo produced by communes and brigades in forest areas should be purchased and marketed by the Ministry of Forestry. This policy should also apply to commune members and plant trees on private plots or on plots designated by the production teams. Such a policy is designed to mobilize enthusiasm for planting trees and protecting forests.

Forestry departments at all levels as well as supply, marketing and transport departments should set an example by strictly implementing the related stipulations of the emergency circular issued by the State Council. Above all, forestry departments, as law enforcers should avoid violating the law by logging and reselling timber for illegitimate profit. Those who violate the stipulations must be severely dealt with.

It is imperative for the people's governments at all levels to implement the State Council's emergency circular and regard the proper safeguarding of forest resources as an urgent task. Administrative and judicial departments and those dealing with industry and commerce should stop reckless and indiscriminate logging and regard this task as their own important responsibility. They should take prompt action, rely on the masses and act in concert to stop firmly the evil practice of reckless logging.

## 'RENMIN RIBAO' URGES COMBATING LEFT-DEVIATIONIST THINKING

OW111341 Beijing XINHUA Domestic Service in Chinese 0748 GMT 11 Jan 81

[Text] Beijing, 11 Jan (XINHUA)--Today RENMIN RIBAO frontpaged a report on Shandong Province's Liaocheng, Dezhou, Heze and Huimin prefectures reaping an unprecedented bumper cotton harvest last year. The bumper harvest is attributable to these prefectures' persistent implementation of the guidelines of the 3d plenary session of the 11th CCP Central Committee, rational readjustment of agricultural production in the light of local conditions as well as strengthening the system of production responsibility, the report said. The paper also carried a commentator's article entitled: "Heartening Good Tidings."

The article said: Shandong Province's Heze, Liaocheng, Dezhou and Huimin prefectures are comparatively poor prefectures of the country. Nevertheless, surprising changes have occurred in these prefectures within the short span of 2 years since the convocation of the 3d plenary session of the 11th CCP Central Committee. Such changes are the manifestations of the effectiveness of the party's policies. They have enabled us to realize the great potential of the rural areas and have filled us with confidence and hope for the future agricultural development.

The article said: Practice over the past 2 years in these prefectures has shown that poverty and backwardness are not to be feared. What we must be afraid of is that we cannot free ourselves from the shackles of the "left-deviationist" thinking. Overcoming various obstructions, the spring breeze of the party's third plenary session has blown to thousands upon thousands of families in these prefectures and has shattered the bonds of "left-deviationist" thinking which fettered the cadres and the masses. The long-repressed initiative has begun to sprout and the people's enthusiasm and creativity have also begun to come into play. The longstanding situation in which agricultural production was at a standstill or even retrogressed has rapidly been reverted. The speed of development in the past 2 years in these prefectures, which have a cultivated area of more than 40 million mu and a population of upwards of 20 million, has surpassed that in the previous 20 years.

The article said: The changes in these prefectures have also shown that, despite the fact that we have gone through many twists and turns and have done many silly things and encountered many setbacks and failures over the years, there are still a large number of good party members and cadres in our party who dare to safeguard the people's interests. Having accumulated experience, heightened



understanding, aroused by the strong sense of responsibility to free the people from hardships and having the lofty conviction and passion to struggle for the people's interests, they dare to break through the trammels of the "leftist" conventions by working out new methods suited to the demands of the masses according to actual conditions.

The article concluded: Over the past 2 years, the cadre rank and file, who have shown concern for the people's well-being, have realized through practice that the policies of the party's third plenary session are in keeping with the people's interests. At the same time, the broad masses of peasants, who have reaped benefits and have seen hope in the policies of the party's third plenary session through actual practice, urgently wish that the party's policies will remain stable. To enliven the rural economy and to enable the peasants to prosper as soon as possible is the decision of the party's third plenary session. For this reason, we must unswervingly carry out the party's policies. We must educate the peasants to have a clear understanding of the situation and to overcome the mentality of fearing that such policies may be "changed" or "revoked." In order to increasingly enliven and prosper the rural economy, we must also further strengthen management, improve the production responsibility system and eliminate the phenomenon of violating law and discipline in implementing the policies.

CSO: 4020

## BRIEFS

**SANDY SOIL GRAZING**—Nanjing, 22 Dec (XINHUA)—A kind of tough and nutritious grass introduced from Britain 17 years ago has helped China transform large tracts of sandy sea beaches into grazing grounds. One state-run and 14 collective sheep farms have been set up along the beaches of Qidong County in coastal Jiangsu Province where big rice grass (*spartina anglica*), first brought to China from Britain in 1963, has been grown. Resistant to salt and flood, the grass grows well on sandy land and contains as much protein and fat as other forage grass. A lamb weighing 4 or 5 kilograms, fed mainly with the grass, can grow up to 20 to 25 kilograms in 3 months. When planted on beaches, the grass helps prevent beach erosion and improve the soil. It is now being popularized in many places along China's coastal areas from Liaoning Province in the north to Guangdong Province in the south. [Text] [Beijing XINHUA in English 0712 GMT 22 Dec 80 OW]

**BOOK ON GYMNOSPERMS**—Beijing, December 28 (XINHUA)—An authoritative book on gymnosperms (plants having naked seeds) written under the guidance of Professor Zheng Wanjun has won a first-grade award conferred by China's Ministry of Forestry. Entitled "Phylum of Gymnosperms," the book contains detailed, well-documented descriptions of the morphological characteristics, geographic distribution and environment of 236 varieties of the plants. Over 90 percent of the varieties are illustrated. It is regarded among academic circles as the most comprehensive and authoritative work in that field. Professor Zheng Wanjun, 76, is president of China's Academy of Forestry Science. He has studied Chinese gymnosperms for more than half a century and discovered and named more than 100 varieties of plants. The 589,000-character award-winning book written under his guidance is part of the "China Flora." It has been highly appreciated in China and abroad since its publication in 1978. Professor Zheng Wanjun is now writing a four-volume book on trees in China. The first volume, with more than a million characters, is due to be published in 1981. [Excerpts] [Beijing XINHUA in English 1220 GMT 28 Dec 80 OW]

**CHINESE SEED SOCIETY**—Tianjin, December 25 (XINHUA)—The Chinese Seed Society, a mass organization, was set up at a national discussion meeting held in Tianjin last week. The society aims at conducting technical exchanges and scientific research on seeds for agricultural experts and technicians as well as popularizing seed science. It plans to set up two groups concerned with improved varieties and seek inspection, and publish periodicals on seeds. Attended by 120 representatives from various parts of China, the discussion received over 100 papers and suggestions. [Text] [OW262200 Beijing Radio in English 0235 GMT 25 Dec 80 OW]



**APICULTURE DEVELOPMENT** --Changchun, 22 Dec (XINHUA)--Chinese commercial departments bought 80,000 tons of honey this year, though production was hampered by low temperatures and damp weather in the south and dry weather in the north. The purchase, disclosed at a recent national meeting on bee-keeping called by the Chinese Academy of Agricultural Sciences in Yanji City, Jilin Province, amounted to some 30,000 tons more than the annual average before 1976, but 30,000 tons less than last year. It was also revealed that the country now has a total of 5.3 million colonies of bees as against 3 million in 1976, individual peasants owning 60 percent. Apart from the National Institute of Apiculture under the Academy of Agricultural Sciences, there are now 9 research institutes at the provincial level and 40 breeding farms at or above the county level, which play a great role in propagating improved strains of bee. The Yanbian Korean Autonomous Prefecture in Jilin, a prime bee-raising area, has increased its bee colonies from 40,000 in 1977 to 62,000 this year, including nearly 50,000 of improved strains. [Beijing XINHUA in English 0708 GMT 22 Dec 80 OW]

**TEMPORARY GRAIN STORAGE**--Hangzhou, December 23 (XINHUA)--The Chinese Ministry of Food has decided to popularize the use of tent-type aeration granaries--a new technique for temporary storage of grain--throughout the country after a technical appraisal in Zhejiang Province, east China. The granary uses double vinylon sheets to cover grain. Air is pumped between the sheets and all sides are fastened. Air blowers are used to ventilate the interior to eliminate humidity. At present, each granary can store some 50 to 350 tons of grain. The granary is simple and light, and can be put up or removed easily. It can keep grain up to six months. The new granary technique is being developed by the Zhejiang Provincial Grain Research Institute. [Text] [Beijing XINHUA in English 0715 GMT 23 Dec 80 OW]

**AQUATIC PRODUCTS OUTPUT UP**--Beijing, 21 Dec (XINHUA)--China's harvest of aquatic products between 1 January and 31 October this year was nearly 2.98 million tons, 1.8 percent more than the same period in 1979 according to figures released by the Aquatic Products Bureau. An official said that with the freshwater catch up 12.7 percent, the biggest increase in a dozen years, the annual plan will probably be overfulfilled. The saltwater catch of 2.06 million tons, however, was deliberately reduced by 12,000 tons this year in order to protect China's offshore aquatic resources. Both fresh and salt water breeding are being encouraged. Freshwater hatcheries have been increased by 13,000 hectares, to a total of 267,000 hectares, while saltwater breeding areas were expanded to 140,000 hectares, 18.5 percent more than last year. [Beijing XINHUA in English 0711 GMT 21 Dec 80 OW]

**EDIBLE OIL PROCUREMENT**--Beijing, 9 Jan (XINHUA)--According to statistics compiled by the Ministry of Food, as of 5 January 1981 the national edible oil purchase quota for 1980 had been overfulfilled by 5.5 percent, and the amount purchased was 7.8 percent more than during the same period last year. Up to now, 19 provinces, municipalities and autonomous regions have overfulfilled their edible oil purchase quotas. They are Sichuan, Guizhou, Yunnan, Gansu, Qinghai, Ningxia, Xinjiang, Henan, Guangdong, Fujian, Shandong, Beijing, Tianjin, Hebei, Shanxi, Nei Monggol, Liaoning, Jilin and Heilongjiang. [Beijing XINHUA Domestic Service in Chinese 1507 GMT 9 Jan 81 OW]

**SIDELINE PRODUCTION EXPANSION**--Beijing, 4 Dec (XINHUA)--China is now producing more than 5 times as many apples as 15 years ago. This is the result of the national effort to promote apple production. Apple trees are now growing in most provinces north of the Yangtze River. The Chinese Government has given special attention to more than 1,000 counties in the production of apples, oranges, silk, hemp, tea, edible fungus, dates, long-hair rabbits and other sideline products. Since 1972, interest-free loans, totalling 780 million yuan, have been issued to help peasants in these counties with the production. As a result, total purchase of oranges in China in 1979 more than doubled the 1965 figure. Production of black edible fungus, a good nutrient for Chinese dishes, has increased more than three times during the 15 years. Total purchase this year is expected to be 4,500 tons, 350 tons more than last year. More than 30 counties are now growing jute and bluish dogbane which China had to import to meet its needs in the past. The national purchase last year totalled 1.05 million tons, almost 4 times the 1971 figure. [Text] [Beijing XINHUA in English 1208 GMT 4 Dec 80 OW]

**SEED PRODUCTION FIGURES**--Over 90 percent of the counties in China have established state-run farms to produce fine seed strains and over 300 counties have been carrying out experiments on specialized production of seeds and processing seeds by machines in order to insure standardized quality of seeds. This year China's seed companies have supplied 3.7 billion jin of fine seed strains to various places, or 10 percent of the seeds needed throughout China. As a result of following the state's regulations in supplying seeds, all places have conserved seeds and increased production. This year China has planted 79 million mu of cross-bred rice and the per-mu yield has increased 20 to 30 percent over that yielded by conventional seeds. [Beijing Domestic Service in Mandarin 1200 GMT 20 Dec 80 OW]

**EARTHWORM-RAISING MEETING**--From 16 to 21 December the Agriculture Ministry's General Animal Husbandry Bureau held a meeting in Shanghai to exchange experience gained in the past 2 years in raising earthworms by artificial methods. The meeting noted that such methods of raising earthworms are still in an experimental stage and not yet suitable for extensive popularization in urban or rural areas. [Shanghai City Service in Mandarin 2300 GMT 21 Dec 80 OW]

**WINTER RAPE CROPS**--Beijing, 12 Dec (XINHUA)--The area of winter rape crops in China this year is the largest since the founding of the PRC--6 million mu larger than the 1979 winter rape area. Winter rape accounts for one-third of the total oil-bearing crops in China. The winter rape area in Henan, Guizhou and Anhui provinces each has increased by 1 million mu this year as compared with last year. [OW180625 Beijing XINHUA Domestic Service in Chinese 0208 GMT 12 Dec 80 OW]

**AGRICULTURAL METEOROLOGICAL MEETING**--The Chinese Meteorological Society held a national meeting on analysis and use of agricultural climatic resources in Hangzhou from 2 to 8 December. At the meeting 172 agricultural and meteorological experts from various parts of China discussed how to rationally use agricultural climatic resources. [Hangzhou Zhejiang Provincial Service in Mandarin 1100 GMT 11 Dec 80 OW]

## BRIEFS

**GRAIN PRODUCTION**--Fengyang County, a historically impoverished county in Anhui, has produced 300 million jin of grain in 1980, or 205 million jin higher than 1978. The county, which used to consume the state's resold grain, has sold 100 million jin of grain to the state this year. [Hefei Anhui Provincial Service in Mandarin 1100 GMT 30 Dec 80 OW]

**BUMPER HARVEST**--Suixi County in Anhui has reaped a bumper agricultural harvest this year. Compared with last year, which was also a year of good harvest, its grain output this year has increased over 20 million jin, total output of oil-bearing crops has increased more than 40 percent, and its cotton output has doubled that of last year. [Hefei Anhui Provincial Service in Mandarin 1100 GMT 30 Dec 80 OW]

**RURAL WORK CONFERENCE**--The Anhui Provincial Party Committee held a province-wide telephone conference on 3 January, calling on the various localities to work out plans on rural work and to step up efforts in repairing irrigation facilities and protecting winter crops. Wang Guangyu, secretary of the Provincial Party Committee, delivered a speech at the conference. [OW060831 Hefei Anhui Provincial Service in Mandarin 1100 GMT 4 Jan 81]

CSO: 4007

## BRIEFS

**STATE FARMS PRODUCTION**--Fujian Province's state farms have increased production and income this year. The total industrial and agricultural production value amounted to some 93 million yuan, showing an increase of 23.9 percent over the same period last year and profits amounted to 1.5 million yuan. The state farms increased production and income by carrying out readjustment and implementing various new production responsibility systems. Thus production costs were lowered and income of workers and peasants increased. [HK070815 Fuzhou Fujian Provincial Service in Mandarin 1035 GMT 30 Dec 80]

**WINTER SOWING**--Fujian Province has basically fulfilled this year's winter sowing tasks. By late December, the province has sown some 2.24 million mu of wheat, overfulfilling the year's plan by 3,000 mu and the province has sown 890,000 mu of rape seed, showing an increase of 119,000 mu over last year. [HK070815 Fuzhou Fujian Provincial Service in Mandarin 1035 GMT 30 Dec 80]

**AGRICULTURAL DEVELOPMENT**--According to the statistics of the Fujian Provincial Agricultural Bank, from January to November 1980, the province has provided 6.2 billion yuan in credit to assist communes and brigades to develop agricultural and sideline production. The amount of credit provided this year was an increase of 28 percent over the same period last year. Some 99,500 production teams were provided with credits which accounted for 60.7 percent of the total number of production teams throughout the province. The production teams used the credits to buy machinery, fertilizer and cattle and to improve the livelihood of peasants. In addition to this, the communes and brigades also set up 716 small hydroelectric stations. [HK070815 Fuzhou Fujian Provincial Service in Mandarin 1035 GMT 31 Dec 80]

CSO: 4007



## ATTENTION TO COST ACCOUNTING FOR FARM PRODUCTS STRESSED

Guangzhou NANYANG RIBAO in Chinese 10 Oct 80 p 2

[Article by Wei Shuangfeng (7614 7175 7685), director, Chinese Institute of Agricultural Economics: "Stress Cost Accounting for Farm Products To Accelerate Development of Agriculture"]

[Text] How can fullest use be made of Guangdong's special advantages for the rapid development of agricultural production? We believe one issue cannot be ignored, and that is close attention to cost accounting for farm products. Here we will talk about our own incompletely formed understanding of this issue.

Cost accounting for farm product is the core ingredient of economic accounting and scientific management, and an indispensable means of realizing the modernization of agriculture. By carrying out the work of cost accounting for farm products, it is possible to discover the reasons for high costs in agricultural production, to propose steps for a reduction in costs, and to summarize experiences in production and management. It is also possible to carry out a policy of hard work and thrift in the operation of communes, to improve administration and management, to improve economic results, and to attain the goals of increased output and increased income. It is possible to give effective leadership to agricultural production for the party and for the government, to chart a rational pattern of agricultural production, and to provide, as well, reliable economic data for the formulation of pricing policies for farm products.

During the period of the rampage of Lin Biao and the "gang of four," farm product cost accounting was destroyed, and agricultural administration and management sank into chaos in the universal emergence of the mistaken way of doing things of "attention only to increases in production with no attention to the practice of thrift; and attention only to quantity of output with no attention to costs." This seriously impaired agricultural production and the development of the agricultural economy. Once the "gang of four" was smashed, under the leadership of the Party Central Committee, numerous regions and units restructured their agricultural administration and management work, began to give attention to economic accounting, and strived for economic results. Last year at the All China Farm Products Cost Accounting Symposium, it was decided that starting in winter 1979, 150 farm products cost accounting points would be test operated throughout China. Those operated the six counties of Xinhui, Chaoan, Fengkai, Dongguan, Gaoshou and Qingyuan showed definite accomplishments.

Nevertheless, the excessively high cost of farm products continues to be a prominent problem in agricultural production. At the All China Agricultural Economic Investigation and Reporting Conference recently convened by the State Agricultural Commission, every test site unit talked about the year by year upward creep in costs for farm products. A comparison of 1978 with 1963 in Han County, Sichuan Province, for example, showed a 41.2 percent increase in per unit yields of paddy, with costs more than doubling. In Wu County, Jiangsu Province, in 1966 the cost per mu of paddy was 42 yuan. As of 1978, this had risen to 73 yuan. In 1957, per dan costs of paddy averaged 6.92 yuan in Qujiang County, Guangdong Province. As of 1979, the cost had risen to 12.59 yuan. It may be seen from the foregoing that during the past 10 years costs of farm products has increased 10-fold everywhere throughout the country. A look at the structure of costs for production of farm products shows a common characteristic, namely that in the cost of farm products, expenditures for materials is substantial. A look at materials in the aforementioned places shows that expenditures for materials equals about 35 percent of total output value, and that among expenditures for materials, the proportion spent for chemical fertilizer was greatest, standing at 38.8 percent. Farm manure amounted to 6.6 percent; expenditures for tractor plowing amounted to 7.2 percent; farm chemicals amounted to 5.3 percent; expenditures for seeds amounted to 4.8 percent; and costs incurred for drainage and irrigation amounted to 3.7 percent. There were also some indirect expenses. Many problems also exist in expenditures for living labor, as for example, enforced idleness resulting from poor work organization, and a low labor productivity rate.

Why is the proportionate expenditure for industrial goods needed to support agriculture such as chemical fertilizer and use of farm machinery a particularly large part of expenditures for materials? On the basis of a survey conducted in Boluo, we believe there are several reasons, as follows: (1) Capital investment in chemical fertilizer is large, and the quantity used is great. During the 1960's, for every jin of chemical fertilizer spread, paddy output increased by from 3 to 4 jin, but now increased output amounts to only about one-half jin. During the past 10 years there has been little application of local fertilizers of miscellaneous origin, and a gradual decline has occurred in soil fertility. (2) The quality of existing farm machines is poor; pieces of equipment do not match up with each other; costs are high; and benefits derived are slight. The survey showed that tractor plowing increased yields per mu of paddy by 30 jin at a cost of 3.60 yuan. Done by a hand tractor, the cost per mu is 3.20 yuan, for a 0.40 yuan benefit to the farmer. If a medium size tractor is used, the cost per mu is 3.80 yuan for a 0.20 yuan loss for the farmer. Use of a large tractor costs 5.20 yuan per mu for a 1.60 yuan loss. Small wonder that the farmers complain, saying, "Machines, machines. When the quality is good, it is the machines. When it is bad, it is strangulation. If things go on like this, it will be the death of us." Because costs for the use of farm machines are high, the farmers do not want tractors in the fields. (3) Industrial goods used to support agriculture are poor in quality and high in price. Large quantities of them are used; they do not hold up; and waste is great. In the case of the Gangxia Production Brigade in Boluo County, 1965 expenditures for farm chemicals averaged only 0.055 yuan per mu, but by 1979 the expenditure had increased 20-fold, reaching 1.2 yuan. Apart from increases in the amount of farm chemicals necessitated by increased resistance to chemicals of diseases and insect pests, the increase is attributable to witless direction. Without bothering to check and study, individual leaders just simply issued orders for across the board spraying of chemicals to get rid of insects,



thereby creating waste. Another case involves use of plastic sheeting. For the propagation of the early rice crop, about 120 kilograms are needed per mu. Each kilogram costs 2.94 yuan for a total expenditure of 353 yuan. One mu of rice seedlings is sufficient to transplant 6 mu of fields, so the per mu expense is 59 yuan. Formerly plastic sheeting could be used for 4 years in a row, but now it lasts only 2 years, so annual cost per mu is about 24.5 yuan. Then there are small farm implements such as square bamboo baskets, wooden buckets, and hoes. The farmers say the quality of all of them is poorer than during the 1960's. Furthermore, if administration and management is not good and non-productive expenditures large, the burden placed on the production teams is excessive, expenditures for seed large, etc, all are reasons for the annual creeping up of the cost of farm products.

What, then, is the way to lower the cost of farm products? I believe a fundamental way must be efforts to increase the labor productivity rate in agriculture, to increase output, and to conserve on expenditures. By this, the following is meant specifically:

First, adoption of advanced agricultural science and technology for the scientific farming of the land to increase the labor productivity rate in agriculture and the productivity rate of the soil. According to a survey, the fertility of the soil in numerous communes and brigades is progressively diminishing, and a study of the causes shows improper use of the soil. In most cases paddy rice is grown in one crop after another with no combining use of the soil and nurture of the soil. The Shiba Commune in Boluo County rotates plants of the grass family with pulses in a sensible cycling of natural capabilities in which the fertility of the soil finds replenishment. Consequently, not only has it been possible to increase output of paddy rice and peanuts, but the fertility of the soil has also been maintained.

Second is rational use of chemical fertilizer, farm chemicals, seeds, and plastic sheeting, particularly rational applications of chemical fertilizer, which is both a necessity for increased output and an important measure for conserving expenditures. A survey shows that some communes and brigades apply fertilizer blindly, not using it during the crucial period when crops need it. This is an extremely great waste. The amount of chemical fertilizer currently distributed for production of grain is slight, while the amount of award sale fertilizer expended on non-staple agricultural crops, which do not need chemical fertilizer, is excessive. The peasants report that chemical fertilizer allocated to grain crops is currently less than 10 jin per mu, but no matter how lousy the product they sell the state, they, nevertheless, obtain award sales of quite a bit of chemical fertilizer. In order to develop grain production, there should be an increase in fertilizer for the production of grain crops, and it should be allocated and supplied as part of the agricultural battle line.

Third is improvement in the management of farm machines to increase the rate of those in operation, the rate of work done, and the rate of use; reduction in expenditures for petroleum, materials, and repairs, and a decline in the cost of operating farm machines. In order to get the best utilization rate from large and medium size tractors, reduce repair expenses, and lower costs of farm products, possibly state operated tractor farms should be revived and tractor plowing teams established to do the plowing for production teams. Large and medium size

tractors could be calculated in money terms and administered by the state owned stations, with the purchase price being paid off over the years. Hand tractors would be administered by production brigades or production teams.

Fourth is improvement in administration and management, a complete system of responsibility for production, increased economic accounting, decrease in the burdens of production teams, and increase in collective income. Survey has shown that when numerous brigades and communes have established a system of responsibility linked to output, while at the same time taking action to hold down expenses, the enthusiasm of the masses has been aroused, with increases in production and saving in expenditures resulting. Meanwhile, it is also necessary to intensify economic accounting, to analyze economic activity at fixed periods, and to promote the practice of economy in expenditures. Remuneration to personnel in business enterprises operated by brigades should, in places where conditions permit, be uniformly distributed by the business enterprises. The staffing and reimbursement of brigade cadres and teachers in schools run by the farmers should take into consideration reduction of the burdens on production teams.

9432

CSO: 4007

## BRIEFS

**BUMPER HARVESTS**--Guangzhou, 21 Dec--Zhongshan County, Guangdong, has reaped an all-round bumper harvest in agriculture this year. The county's total rice output was 930 million jin, or 131.65 million jin more than the 1979 output. The amount of marketable grain provided by the county for the state was 400 million jin, the largest among all the counties in the province. The average per-mu output from the county's 800,000 mu of paddy field was 1,161 jin. At the same time, the output of the county's industrial crops, including sugarcane, cocoons and peanuts, also increased by a large margin. [Beijing Xinhua Domestic Service in Chinese 0348 GMT 21 Dec 80 OW]

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## BRIEFS

**PRODUCTION RESPONSIBILITY SYSTEMS**—Guangxi Region is strengthening and perfecting agricultural production responsibility systems in various areas throughout the province in order to develop the collective economy and motivate the peasants' activism. There are now already 6,600 experimental points in production responsibility systems throughout the province and peasants have begun to realize the importance of establishing production responsibility systems. By the end of December, there are 78,400 production teams in the region which have implemented various production responsibility systems. [HK070801 Nanning Guangxi Regional Service in Mandarin 1130 GMT 31 Dec 80]

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## BRIEFS

**BELJING DROUGHT**—Beijing, January 14 (XINHUA)—As the north China drought continues, peasants in the rural areas around Beijing have been asked not to take irrigation water from the major reservoirs supplying the capital. Municipal authorities said today that 84 minor reservoirs have dried up and the two main reservoirs, Miyun and Guanting, are down to a total of 1,400 million cubic meters of water, less than half the amount they held this time last year. The authorities said this meant effective reserves of 30.5 percent of the guaranteed supplies in the same period last year although the city residents and market gardeners within the city boundaries were not likely to be affected. Peasants in the outlying areas were today digging pits to accumulate the light snow that fell over the capital district in the early hours and were putting pumps in place at the remaining ponds in case they are needed in the spring. Beijing Meteorological Office said today that good rains are not likely until May. Rainfall last year was only 55 percent of the average and the last moderate rains were in December. [Text] [OW141224 Beijing XINHUA in English 1201 GMT 14 Jan 81]

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## HEILONGJIANG

### BRIEFS

RICE OUTPUT--Heilongjiang Province reaped a bumper rice harvest in its more than 4.5 million mu of rice paddies last year. Its per-mu-yield is over 500 jin, and its 1980 rice output topped the records of previous years. [SK060650 Harbin Heilongjiang Provincial Service in Mandarin 1100 GMT 5 Jan 81]

CSO: 4007

BRIEFS

PINGYU COUNTY GOATS—Commune members in Pingyu County, Henan Province, are encouraged to raise goats. In 1980, the number of goats in the county increased to 297,000, or 60,000 more than in 1979. [Beijing XINHUA Domestic Service in Chinese 0223 GMT 4 Jan 81]

CSO: 4007

**BRIEFS**

**FISHERY PRODUCTION**--By the end of November, Hubei Province's fish catch has already amounted to 213 million jin, showing an increase of 27 percent over the same period last year. The provincial government has encouraged all 157 state fish farms in the province to implement new production responsibility systems and promote side-line production. Thus, fishery production increased despite unfavorable weather. Peasants have also been encouraged to develop pond breeding by making greater use of the land. According to statistics, some 280,000 households are engaging in fish breeding. [Wuhan Hubei Provincial Service in Mandarin 1100 GMT 29 Dec 80]

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## BRIEFS

**FARM PRODUCTION**--Changsha, 23 Dec (XINHUA)--This year over 80 percent of the production teams in Xinhua County, Hunan Province, have carried out a fixed quota system based on individuals for output from dry fields, resulting in increased production. The total grain production this year is 5 percent more than last year, while output of sweet potatoes has increased by 13 percent. Output of peanuts, soybeans and green beans has been double the amount produced last year. [Beijing Domestic Service in Chinese 0256 GMT 23 Dec 80 OW]

CSO: 4007

## ECONOMIC JOURNAL ON JIANGSU COMMUNE INDUSTRIES

HK260658 Beijing JINGJI GUANLI in Chinese No 11, 15 Nov 80 pp 41-42

[Article by Song Bokai [1345 0590 0418] of the Agricultural Economic Research Institute of the Chinese Academy of Social Sciences: "Why Do the Commune Brigade Industries in Jiangsu Province Develop Faster?"—passages within slant-lines denote boldface]

[Text] In Jiangsu Province people are more successful with agriculture production than in other provinces and the commune brigade industries are also developing faster. There were more than 7.5 million commune brigade factories by the end of 1978. There are 3.25 million people engaged in industry, accounting for 13 percent of the total of the rural labor force. With an average output value of each laborer reaching 2,180 yuan, the gross output of commune brigade industries stands at 6.3 billion yuan which makes up 17.3 percent of that of the industries of the entire province and 38.7 percent of that of the rural agriculture and sideline industries. The commune brigade industries of Jiangsu have become a major economic force as well as an important component of our national economy.

The reasons why the commune brigade industries in Jiangsu Province have rapidly developed are:

1. /Measures have been taken to suit local conditions and the special and superior features of the province were brought into full play./ Historically the village handicrafts of Jiangsu have flourished. Quite a lot of the local villages engage in such sidelines and industries as silkworm breeding and wine-making. Many peasant households along the banks on both sides of the Chang Jiang and along the Shanghai-Nanjing railway have one or two members each working in large cities. Therefore traditionally the cultural, technical and technological levels of these places have been higher. In addition, they have superior conditions for developing commune brigade industries. They have an adequate labor force and are more active economically. These conditions have been brought into full play. By making use of their superior geographical locations and differentiating in production targets, they have developed various industrial undertakings with each having its own characteristics. For instance, along the Shanghai-Nanjing railway, various industries have developed. In the large cities, there are industries which renovate industrial equipment. In the suburbs of large cities and in the small and medium-size cities such as Suzhou, Wuxi, Wujing and Danyang, there are industries for the making of spare and



component parts and for processing raw materials needed by the major industries. In this way, electronic components, electroplated products, textile products like polyester cotton and silk, machinery and farm implements, industrial chemical products and traditional handicrafts have developed. In villages and mountain and hill areas far away from cities, local resources have been drawn on to develop the building materials industry to make bricks, tiles, sand, stone, lime, concrete as well as prefabricated concrete products. At the same time, silk reeling, sugar refining, tea processing and wine-making, paper manufacturing as well as farm produce and sideline product processing industries have also developed. Since the industries involved are many and there is a variety of products, the commune brigade industries have been more able to meet the production demands of the masses.

2. /Management is better administered, the power of existence, vitality and competitiveness reinforced and the quality as well as the variety of colors and designs improved./ The quality of products is of utmost importance to commune brigade industries. Products of poor quality will lose their competitiveness and commune brigade enterprises will be eliminated. As commune members put it, "Commune brigade industries are no princess (a princess never has to worry about not being able to find a husband). They are only the daughter of an ordinary person. Being a part of the people's economy, they have to produce quality products at low prices to find a market and be competitive." Retired older workers who have returned to their native villages are hired by many of the local commune brigade enterprises as consultants to supply technical advice. A system of serious inspection on the quality of products has been established. Under this system, each level is held responsible for and to check on the quality of products.

3. /The market situation and demands are understood and adapted to./ Here close attention is paid by commune brigade enterprises to the timely understanding of the market situation and production is carried out according to the market demands. As the market situation is volatile, commune brigade industries are only engaged in production in small quantities. Hence they are just like "a small car which can turn round fast," and can make timely switches to produce other goods according to the market demands. For instance, the woolen sweaters, acrylic fiber clothes and nylon clothes manufactured within a short time by some commune brigade enterprises in accordance with the changes in market demands are selling well both in our country and abroad.

4. /Markets are opened up in every possible way to insure the sale of the products./ Products are not only produced to be sold locally and throughout the province, but also to be sold nationwide and even overseas. For example, the thermo-flasks manufactured by Fengquiao Commune in Wu County have been selling well in the four large cities of Beijing, Tianjin, Xian and Taiyuan, while lime from Yixing makes up for 54 percent of the total amount used by Shanghai. In 1978, eight counties in the Suzhou area jointly held a sales exhibition of industrial products, and transactions reached as much as 25 million yuan, 80 percent of which were accounted for by commune brigade industries. Here the commune brigade industrial products made their way onto the international market. Of the 2 billion yuan accrued from foreign trade for the province in 1978, 180 million yuan was earned by the sale of commune brigade industrial products (mainly traditional handicrafts), accounting for 9 percent of total revenue.

5. /The relationship between the commune brigade industries and agriculture is correctly handled./ The profits earned by the commune brigade industries are not only used to expand production of commune brigade enterprises, but also to support agriculture, speed up agriculture development, improve the living conditions of commune members and develop collective welfare projects. In 1978, all of the commune brigade industries throughout the province realized a profit of 766 million yuan, of which 54.5 percent was used to expand production of commune brigade enterprises, 31.3 percent to support agriculture, 5.6 percent to develop collective welfare projects and 8.6 percent to support poor brigades.

6. /Rational allocation of agriculture, sideline and industrial labor forces./ On the premise of insuring that there is an adequate labor force in the forefront of agriculture, labor force is allocated to engage in commune brigade enterprises according to the workload. In areas where the development of commune brigade industries is faster, the allocation of the labor force was made to insure in principle that the labor in the forefront of agriculture will not be less than 50 percent, that for commune brigade industries will not in general exceed 30 percent and about 10 percent is to be allocated to sideline industries. Furthermore, the labor is allocated in such a way that when there is a lot of farming to do, it will engage in farming, and when there is not much to do in farming, it will turn to industries. Take the Yangshi Commune in Wuxi County for example. It is a commune where the development of commune brigade industries is fast. The allocation of labor in 1978 was 70.2 percent for agriculture, 8.8 percent for sideline production and 21 percent for industry. Thus, it not only insures that there is adequate labor force in the forefront of agriculture, but also takes care of the labor required for promoting a diversified economy. In addition, a certain amount of the labor force has been deployed to develop commune brigade industries. More labor force will be deployed to engage in such industries following the raise in the level of agriculture mechanization.

7. /Adherence to the principle of distribution according to work, giving consideration to the distribution level between agriculture and industry so that the remuneration of the people engaged in industries in commune brigade enterprises is similar to that of those people who are of the same category and are engaged in agriculture./ According to the practical experiences of other places, the commune brigade enterprises in Jiangsu generally carry out the policy of "labor in the factories, distribution by the brigade, settling accounts by the factories and the brigade and appropriate subsidy," to insure that the income of those engaged in industry does not differ too greatly from that of those engaged in agriculture. Consequently, those engaged in industry will not be divorced from agriculture. Instead, they will be concerned about agriculture production while those engaged in agriculture will be concerned about commune brigade industries. In this way, the initiative for developing both industry and agriculture will be brought into play.

8. /The leading economic departments at all levels have attached importance to leading commune brigade industries, making it the important order of the day and treating the development of rural economy as important work./ Bureaus of commune brigade industries have been set up by the provincial, local and county authorities to further strengthen the leading and management of commune brigade industries. At the same time, county-run industries have been organized to provide

labor, materials and financial support and propping up to commune brigades which have weak industrial foundations in order to assist them in their development. Leading cadres at all levels often come up with ideas for commune brigade industries, think of ways and means, solicit help from potential supporters and assist in solving major problems. In this way, they really grasp agriculture on the one hand and industry on the other, promoting the healthy development of the commune brigade and the prosperous economy of the rural areas.

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## BRIEFS

**GRAIN, OIL-BEARING CROPS**--Donghai County, Jiangsu, has reaped bumper harvests of grain and oil-bearing crops for this year again. The county's total grain output reached more than 980 million jin, showing an increase of 11.9 percent, or more than 100 million jin, over the 1979 output. Its total peanut output was more than 75 million jin, showing an increase of 18.4 percent, or more than 10 million jin, over the 1979 output. Since 1978 the county has scored an increase of over 100 million jin in grain output and an increase of over 10 million jin in oil-bearing crop output each year. [Nanjing Jiangsu Provincial Service in Mandarin 1100 GMT 21 Dec 80 OW]

**BUMPER HARVEST**--All the 26 communes of Suining County in Jiangsu Province have increased production of grain, cotton, oil and hemp this year. The total grain output in the county is 13.9 percent higher than 1979 and the total output of cotton has doubled. The masses in the county have cultivated 340,000 mu of rice, 170,000 mu of rice and 360,000 mu of corn and other crops. [Nanjing Jiangsu Provincial Service in Mandarin 1100 GMT 30 Dec 80 OW]

**WHEAT PRODUCTION**--The leading comrades in Yangzhong County, Jiangsu Province, recently mobilized some 70,000 people to strengthen field management for the 100,000 mu of wheat crops. Special stress was laid on efforts to resist cold weather and drought. [Nanjing Jiangsu Provincial Service in Mandarin 1100 GMT 31 Dec 80 OW]

CSO: 4007

## BRIEFS

**GRAIN PROCUREMENT**--Siping Prefecture, Jilin Province, had overfulfilled the 1980 state grain procurement plan by 38.6 million jin as of 3 January 1981. The commercial grain handed over to the state per capita from the 2.8 million agricultural population in this prefecture averaged 670 jin. Grain output totaled 4.5 billion jin, an increase of 200 million jin over the 1979 figure. [SK060810 Changchun Jilin Provincial Service in Mandarin 2200 GMT 5 Jan 81]

**BUMPER HARVEST**--Qianan County in Jilin Province, the province's poorest area, reaped a bumper harvest of oil-bearing seeds and beets last year. Its oil-bearing seed output reached 53 million jin, a 160 percent increase over the 1979 figure. Its total beet output was 96.88 million jin, a 71.4 percent increase over the 1979 figure. Thus, the per capita income of this county amounts to 140 yuan, a 23 yuan increase over the 1979 figure. [Changchun Jilin Provincial Service in Mandarin 2200 GMT 6 Jan 81]

**GRAIN PROCUREMENT**--Nongan County, Jilin Province, has put 105,437 tons procured grain into storage. The county overfulfilled the 1980 grain procurement plan by 437 tons. [Changchun Jilin Provincial Service in Mandarin 1100 GMT 7 Jan 81]

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## BRIEFS

**RURAL IMPROVEMENT**--Shenyang, 24 Dec (XINHUA)--Formerly known as a poor place, Fuxin municipality, Liaoning Province, has this year successfully developed production and increased the peasants' income in its suburban counties. Oilseeds harvested this year are three times more than last year. As of the end of November, more than 109 million jin of oilseeds had been sold to the state. Food grain for each commune member averages 460 jin, up by 30 jin compared with last year. [Beijing XINHUA Domestic Service in Chinese 0145 GMT 24 Dec 80 OW]

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## BRIEFS

**REGIONAL DROUGHT**—Nei Monggol Autonomous Region suffered a drought in 1980. Is there a spring drought coming in 1981? To answer this question, our station reporter recently conducted an interview with a comrade at the regional weather bureau. According to the bureau's analysis, there will be a spring drought this year. Rainfall was scant during the last autumn-winter period, and soil moisture is insufficient. To make matters worse, the weather is expected to get warm earlier this spring than in previous corresponding periods and moisture in the soil will vaporize rapidly. Consequently, there will be varying degrees of droughts throughout the region. Torrential rains are expected during or after mid-May. This will alleviate the drought situation to some extent but will fall short of totally relieving the drought. [Hohhot Nei Monggol Regional Service in Mandarin 1100 GMT 6 Jan 81]

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## BRIEFS

**FOOD SUPPLY**—The farms and 10 suburban counties in Shanghai this year have supplied local market with 3.3 million pigs, 9 million chickens, ducks and geese and 90 million jin of eggs. In addition, they exported 15.97 million chickens to foreign markets this year. [Shanghai City Service in Mandarin 2300 GMT 27 Dec 80 OW]

**SOIL ANALYTICAL INSTRUMENT**—Beijing, 6 Dec (XINHUA)—An electronic instrument which can measure a range of elements properties in soil has been produced by a Shanghai factory. The instrument is small, weighing only 5 kilograms, but it can accurately determine nitrogen, phosphorus, potassium, acid and alkali content, temperature and water quality and 11 other properties of soil. It is now on display at a sales exhibition of agricultural scientific instruments at the Beijing Agricultural Exhibition Center. The instrument has been tested for 14 months and production has begun. With various attachments, the instrument can also be used in the medical and dyeing industries, in environmental protection and in surveys of marine resources. It was produced by the Shanghai Guanghua Instrument and Meter Plant in cooperation with the Shanghai Academy of Agricultural Sciences and the Nanjing Institute of Pedology under the Chinese Academy of Sciences. [Text] [OW081711 Beijing XINHUA in English 0715 GMT 6 Dec 80 OW]

CSO: 4007

SHANXI

**BRIEFS**

**COTTON PROCUREMENT**--In 1980, the people in Shanxi have overfulfilled the state's plans on cotton procurement. According to statistics compiled on 25 December, a total of 125.68 million jin of ginned cotton was procured, accounting for 106 percent of the state's plans. The quality of the cotton in 1980 is generally better than 1979. [Taiyuan Shanxi Provincial Service in Mandarin 2300 GMT 31 Dec 80]

CSO: 4007

## INCREASE IN SICHUAN'S RURAL CASH INCOME REPORTED

Chengdu SICHUAN RIBAO in Chinese 13 Oct 80 p 1

[Report by Yu Quanyu [0827 2938 1008]: "Cash Income of Poor Teams Exceeds That of Rich Teams in Rural Areas of Our Province"]

[Text] In the first half of this year, the cash income of members of poor commune teams in the rural areas of Sichuan increased 27.8 percent over the same period last year. This increase is 2.5 percent higher than production teams in general, and 19.9 percent higher than that of rich teams. The cash income ratio of members of poor and rich teams was 1 to 1.73 last year. In the first half of this year this was reduced to 1 to 1.46. This situation clearly shows that there are no grounds for fear of "the gap between rich and poor widening and developing into two opposing extremes."

Information on the above situation is supplied by the rural economy investigation office of the Sichuan Statistical Bureau. For many years they have conducted a detailed and continuous statistical investigation of the income and spending of 1,724 households of commune members among 96 production teams in 36 counties which are representative of economic conditions in plain, hilly, and mountainous areas, as well as in areas inhabited by minority nationalities. In the first half of this year the average cash income of each of these commune members reached 42.3 yuan, an increase of 18.5 percent over the same period last year. The average cash income of each member of 15 rich teams (production teams with an average annual distributed income above 80 yuan per person) rose from 49.2 to 53.1 yuan, an increase of 7.9 percent; that of the members of 65 production teams in general rose from 32.8 to 41.1 yuan, an increase of 25.3 percent; and that of 16 poor teams (production teams with an average annual distributed income under 50 yuan per person) rose from 28.4 to 36.3 yuan, an increase of 27.8 percent. The cash income of the members of all these poor teams increased; not a single team showed a decrease. Of these teams, the cash income of members of the Xuetangwan Production Team of the Shuiyuan Production Brigade in Jiangjia Commune, Baxian County, had the fastest increase. In the first half of this year the average cash income of each person had already reached 78 yuan, far exceeding the average level of a rich team; thus it can no longer be called a "poor team."

The cash income of members of poor teams increased by a large margin mainly because of the low base figure, which had resulted from interference and destruction by the ultraleftist line in the past as well as a particularly backward economy. With the party's policy having been implemented, the present revival and expansion of



the collective economy of production teams and the household sideline production of commune members have been particularly rapid. In the first half of this year, the cash income received by members of the collective's 16 poor teams increased 79.4 percent over the same period last year, and the cash income from selling poultry and livestock that they themselves raised rose 37.7 percent.

9586

CSO: 4007

## INCOME DISTRIBUTION MUST BE CARRIED OUT CONSCIENTIOUSLY

Chengdu SICHUAN RIBAO in Chinese 27 Sep 80 pp 1-2

[Article: "Adhere to the Greater the Work the Greater the Gain in Doing a Good Job of Distributing Annual Earnings"]

[Text] The work of the final accounting and distribution of income, conducted once each year in the communes of rural villages of our province, will be launched everywhere right after the autumn harvest. Conscientious help to enable production teams and communes in rural villages to do a good job in the distribution of earnings for the entire year, in accordance with the party's programs and policies, is a major task facing leadership units at every echelon of the party and government in rural villages throughout the province. Along with the continued thoroughgoing implementation of the Central Committee's two documents on the development of agriculture, and the further implementation of the party's various economic policies in rural villages, a further enlivening of the rural village economy in our province has taken place, and the situation is very good. This year has not seen any major disasters. Grain will show an increase in output over last year, and output from the livestock industry and of economic crops such as silkworm cocoons, economic timber, and cotton and edible oil also is showing increases over last year. These are beneficial conditions for doing a good job in distributing earnings for the whole year to communes and brigades in rural villages. It must be realized at the same time that as a result of the large area over which the system of responsibility for integrated production has been instituted in diverse forms this year, a new situation has arisen such as has not existed heretofore. A minority of production teams have served as test sites for "extra consideration in the distribution of grain on the basis of work points," which is a major reform in the distribution of grain and is a new form of distribution in which experience is lacking. A decline has occurred this year in the output of collectively produced autumn grain, and in some places serious natural disasters have befallen the output of late autumn crops, which will mean definite hardships for the distribution of income and for the living arrangements of commune members. This requires that every jurisdiction be practical and take aim at these new circumstances and new problems, adopting new courses of action in order to do a thoroughgoing and meticulous job of distributing earnings this year.

Adherence to collective ownership of the means of production, adherence to the principle of concern for the interests of the state, the collective, and the individuals, continued adherence to the policy of "rest and recuperation," and guarantees that the income of most commune members will increase as a result of

increased output and increased earnings by production teams for a further arousal of the enthusiasm of commune members to promote overall development of continued stability in agricultural production and to consolidate and strengthen the collective economy--these are the guiding thoughts of doing a good job this year in the work of distributing earnings to communes and brigades in rural villages. Production teams are the basic accounting units of rural people's communes. In the situation pertaining this year of diversified systems of responsibility for production, adherence to unified accounting and unified distribution for production teams helps both to consolidate the collective economy and to make further improvements in the various systems of responsibility for production. Therefore, no matter what the system of responsibility for production, whether it is contracts for production with units, contracts with workers, or other kinds, each production team should conscientiously inventory its products, its cash, its work points, its investments, and all output and earnings comprising production contracted for, and pass the exact figures upward to the production teams for unified distribution. Production and earnings in excess of quota which will revert to work teams, special teams, and individual commune members according to the terms stipulated in contracts must be counted in the total output and total income. Net profits to be turned over must be calculated and distributed in accordance with income recorded on the ledgers of production teams. Production teams should make clear-cut stipulations about the quality criteria for various crops whose production is to be handed over, and the contracting parties must follow these stipulations in tendering crops. In order to guarantee quality, there must also be a rigorous inspection prior to acceptance in order to prevent the occurrence of situations in which inferior things are handed over and good things are kept. Production team income from other industrial and sideline industries, forestry, and aquatic hatcheries must also be uniformly calculated and uniformly distributed. Only in this way will the consolidation of the system of three grades of ownership, in which the production team is the foundation, be benefited and will improvement in the various systems of responsibility for production be effected.

Production teams are socialist collective economic organizations with independent accounting and responsibility for their own profits and losses. Once they have fulfilled their responsibility for the payment of tax revenues to the state and for the sale of agricultural byproducts to the state, how they distribute and what methods they use to distribute their products and earnings to the collective is a decision they have the authority to make, without any meddling by any department or unit. Full respect must be accorded the autonomy of production teams in making distributions. Generally speaking, the method of distribution for early autumn and late autumn grain for personal consumption in any given production team should be the same. This year, throughout the province, distribution of grain in most production teams will continue to be a combination of the methods of basic grain ration, distribution in accordance with work points earned, and distribution of grain according to the amount of manure accumulated, but there will be an appropriate increase in the proportionate distribution of grain in accordance with work points earned. At the time of final settlement and distribution for the entire year, the proportion of distribution of a portion of grain for manure accumulation, for work points, and for basic grain ration will be based on the proportions of predicted distributions of the early fall crops; generally, no further changes will be made. Test site production teams trying out "extra consideration in the distribution of grain on the basis of work points" this year must continue to do a good job of test site work and may adopt methods such as "carrying people according to

their labor," "three fixeds and one supplement," and "both ends guaranteed but distribution according to work points for the middle portion," with diligent implementation of the policy of giving consideration, which can be further extended after experience has been gained on the basis of respect for the autonomy of production teams and the views of the majority of commune members. During the past 3 years, the rural communes and production brigades have distributed most of the increased output and increased earnings to commune members, resulting in substantial increases in the levels of distribution to commune members. This is entirely correct. In this year's distribution, too, insofar as increased output and increased earnings permit, there should be continued increases in the income of the majority of commune members. To this end, in the distribution of grain in terms of the entire province, there should be both a fulfillment of set requisition procurement quotas for the province and for excess purchase and increased purchase quotas, and positively no overdoing of the procurement of grain. In all places where there has been increased grain output, there should be an increase over last year in the amount of grain distributed to commune members for their personal consumption. The problem of production team grain reserves should be handled in accordance with realities. Whenever conditions are such that grain can be held back for grain reserves, production teams should hold back an appropriate amount. In the minority of production teams where serious reductions in output have resulted from calamities, it is necessary to keep back first of all a sufficient amount of seeds, and then to assure sufficient grain for consumption by commune members in taking care of the livelihood of commune members. Poor production teams that for many years have had to depend on grain resold to them by the state should combine adherence to pertinent regulations from the Provincial CCP Committee for reduction or exemption from requisition purchase quotas with doing a good job of distributing this year's earnings. In the distribution of earnings, they should first of all retain a sufficient amount to meet next year's production expenditures, and then keep out a reasonable amount of accumulation funds and public welfare funds, depending on the actual circumstances of the production team. Production expense funds and depreciation expenses should be estimated in accordance with abilities, and action should be taken accordingly. In the minority of production teams where there have been great increases in output with a high level of distribution, an appropriately large amount of funds may be accumulated. Departments concerned should safeguard the economic rights and interests of production teams and not practice egalitarianism or indiscriminate transfer of production teams' labor forces, capital, and products. Any production team whose labor force has been transferred elsewhere should be paid a reasonable remuneration. When brigade-operated enterprises transfer labor forces from production teams for their own use, they should repay them with wages that are somewhat higher than the daily rate for labor in the production team, making final settlements and payment of wages to production teams on time so as to permit calculations of distributions of earnings to be made. In the case of brigades that have sustained a decline in production and a decrease in earnings, banks and credit co-operatives should enter into discussions with production teams on the basis of actual circumstances when collection of interest comes due; they should not harshly deduct the sums due. When authorities concerned operate certain undertakings, they may not requisition grain or labor, paying for it with money, thereby increasing the burdens of the masses. When such a thing happens, the production teams have the right to refuse.

This year has seen new development in the rural communes and brigades of Sichuan Province in the institution of systems of responsibility linked to production.



Some places have instituted a system of individual responsibility for crops in large fields whereby remuneration or determination of rewards to be given are linked to production. Individual places have gone in for "brimming fields" with set production, for which the labor force gets a guaranteed income. For diversified operations and sideline industry production, there has been the promotion of "four specifics," for which contracts are drawn and rewards set. Conscientiously making good on rewards and remuneration is the key to earning the confidence of the people, arousing the enthusiasm of the commune members for labor, and improving the system of responsibility linked to production. Therefore, in this year's distributions of earnings, contracts concluded earlier must be adhered to and matters handled as agreed. Even when the increase in production and earnings is substantial, the exact amounts provided for in the contracts must be handed over to the contracting party. Neither side may tear up the contract agreements on any pretext whatsoever. In some production teams where systems of responsibility linked to production have been instituted, an agreement was reached at the beginning of the year as to rewards and remuneration, but the various quotas and methods of rewards and remuneration have not yet been instituted. In test figuring of the distributions, discussions with the masses should be entered into for implementing quotas and for deciding on a program of rewards and remuneration, in order to make possible the honoring of these things. In some teams where records of economic transactions were not well maintained and where output and workpoint records were messed up, as a result of which it is impossible to make good on commitments, help must be extended to the production teams and commune members to undertake discussion for the adoption of some flexible methods for making good on rewards and remuneration. In cases where, for lack of experience, the contracted production quotas were too high or too low, and the masses themselves also acknowledge that the contracting was not done on the basis of reason, or in cases where severe natural disasters have made it impossible to fulfill the originally established and contracted production quotas, following mass discussion and appropriate readjustments new rewards and remuneration can be calculated. In short, matters must be handled strictly and commitments be lived up to, with no going back on one's word, as that dampens the enthusiasm of commune members and impairs consolidation of and improvement in the system of responsibility.

This year's work of distributing earnings in rural communes and brigades faces numerous new situations and new problems. The importance for policy is strong and the amount of work to be done is great. This is both a major economic activity and a painstaking political task. Consequently, every echelon of CCP committees and every echelon of government in rural villages throughout the province must definitely strengthen their leadership. The principal comrades in charge should themselves do a good job of running the test sites and directing all matters. Cadres must be sent out to every level, work must be divided up and assigned to individuals, and concrete assistance must be given them and responsibilities be made clear. Rural village work units must concentrate their forces to go into communes and brigades during a concentrated period of time to conduct investigation and study in order to help solve problems that exist, and to do a solid job of making distributions. The mass line must be maintained in the course of work, with full play being given to democracy and free rein being given to discussion by commune members for the setting of distribution policies. This must be combined with attention to the training of cadres to improve their professional level so as to assure that a good job of distribution is done. Once distribution policy has been set, full use must be made of the period of time before the final accounting



of distributions, in order to continue to give good care to and make a good harvest of late fall crops, to do a good job of crop production in late autumn, and to do a good job of sorting out and paying back funds in excess of expenses that are owing, striving to organize income and making savings on expenditures in order to make sure that distribution commitments are honored and the income of commune members increases.

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## INCREASED TUNG OIL PRODUCTION HOPED FOR WITHIN FEW YEARS

Chengdu SICHUAN RIBAO in Chinese 21 Oct 80 p 1

[Article: "Speedily Expand Tung Oil Production"]

[Excerpt] Tung oil is an important industrial raw material. Developing its production by suiting measures to local conditions is highly significant for the support of national construction and for increasing the income of the collective and commune members. How can we speedily expand tung oil production in our province to suit the needs of construction of the four modernizations? Recently in Anyue County, concerned departments convened a provincial conference on the production and purchase of tung oil which specially studied this problem and put forth some important measures.

The output of tung oil in our province has reached a historic record of 420 million jin, over a third of the national total. Besides satisfying the needs of industrial and agricultural production within the province itself, the tung oil of our province has in the past been transferred to the state and used to support annual foreign export. For a long time it has been the traditional material in our province's foreign trade, and it enjoys high prestige in the international and domestic markets. Owing to serious interference and destruction by Lin Biao and the "gang of four" in former years, however, many old tung trees in some areas of our province have been cut down. As young tung trees grow very slowly, output of tung oil has fallen sharply. Only 180 million jin of tung nuts were purchased last year, less than half of the figure in the 1950's; commune members in areas in which tung oil is produced lost 40 to 50 million yuan in income. As the output and purchase of tung oil have dropped too low, the amount to be transferred to the state and used to supply foreign trade this year has decreased and also affected the market supply within the province.

To resolve the existing contradiction in the supply and demand of tung oil, it is necessary to speed up the expansion of its production. There are many favorable conditions for expanding the production of tung oil in our province. Our province is vast in territory, with a warm climate and abundant rainfall. The practice of growing tung oil trees began early in history. In the past several years the Provincial Party Committee has paid great attention to the expansion of tung oil production. Thirty-two counties, each with an annual output above 3 million jin of tung nuts, have been defined as foundation counties. Of these, 18 have an annual output above 5 million jin and 12 between 3 and 5 million jin. In recent years state and provincial finances have had to provide an annual fund to help sustain tung oil production. Under the leadership of various levels of party committee and government, and through the striving of the broad masses of cadres and the

people, the present number of tung trees in the province has grown to 300 million, of which more than 200 million will soon become successive resources of new groves and fruit. If we continue to strengthen leadership, and if measures are effective, it is highly hopeful that we can strive for an increase in tung oil production in our province in 2 or 3 years.

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SICHUAN

BRIEFS

PREFECTURE AGRICULTURE--Chengdu, 18 Dec (XINHUA)--Thanks to the adoption of the contract system, the output of grain, oil-bearing crops, hemp and other crops on more than 100,000 mu of low-yield fields in Yaan prefecture, Sichuan, increased by 50 percent to 100 percent this year compared with last year's figures. [Beijing XINHUA Domestic Service in Chinese 0233 GMT 18 Dec 80 OW]

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## BRIEFS

1979 FARM FIGURES--By the end of 1979 the effectively irrigated land in rural Tianjin accounted for 80 percent of the arable land. The number of tractors of every type had increased to more than 19,000; irrigation equipment to more than 89,000 pieces; processing equipment for rural sideline products and animal husbandry equipment to more than 39,000 pieces. Commune accumulation funds increased to 1.2 billion yuan. The output value of brigade-run enterprises accounted for 55 percent of the gross value of agricultural output. Compared to the initial period of the cooperative movement, the gross value of agricultural output increased more than four times. The distribution of cash per rural capita was 145 yuan. [Tianjin TIANJIN RIBAO in Chinese 28 Nov 80 p 1]

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## BRIEFS

**BUMPER HARVEST**--Although Xinjiang's Yengisar County was hit by natural disasters this year, a bumper harvest was still gathered in grain and cotton and animal breeding. Total grain output reached 85.7 million jin, or 6.7 percent more than last year. Total output of ginned cotton reached 1.39 million jin, or 27.8 percent more than last year, and livestock amounted to 190,000 head, or 11.2 percent more than last year. [Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 18 Dec 80 OW]

**COTTON PROCUREMENT**--Kashi Prefecture of Xinjiang has overfulfilled this year's cotton procurement plan. By 10 December, the prefecture had purchased approximately 370,000 dan of ginned cotton, of which over 90 percent is in good condition. The prefecture planted 800,000 mu of cotton in 1980. [Urumqi Xinjiang Regional Service in Mandarin 1300 GMT 18 Dec 80 OW]

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XIZANG

BRIEFS

GRAIN OUTPUT—This year, the total grain output of Chamdo Prefecture, Xizang, will be approximately 10 percent higher than last year. The prefecture's livestock has reached 3.43 million head. [Lhasa Xizang Regional Service in Mandarin 0015 GMT 26 Dec 80 OW]

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